April 15, 2003

Information Technology Management

Global Command and Control System Joint Operation Planning and Execution System
(D-2003-078)

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Acronyms

CJCS	Chairman, Joint Chiefs of Staff
COTS	Commercial Off-the-Shelf
DAES	Defense Acquisition Executive Summary
DISA	Defense Information Systems Agency
EAS	Evolutionary Acquisition Strategy
EPIP	Evolutionary Phased Implementation Plan
GCCS	Global Command and Control System
JOPES	Joint Operation Planning and Execution System
RID	Requirements Identification Document

INSPECTOR GENERAL
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April 15, 2003

MEMORANDUM FOR DIRECTOR, DEFENSE INFORMATION SYSTEMS AGENCY
DIRECTOR, JOINT STAFF

SUBJECT: Report on the Global Command and Control System Joint Operation Planning and Execution System (Report No. D-2003-078)

We are providing this report for review and comment. We considered management comments on a draft of this report when preparing the final report. The complete text of the comments is in the Management Comments section of the report.

As a result of management comments, we redirected Recommendation 2. to the Director for Operations (J-3), Joint Staff. DoD Directive 7650.3 requires that all issues be resolved promptly. We request that the Director for Operations (J-3), Joint Staff provide comments on the recommendation and this report by June 16, 2003.

If possible, please provide management comments in electronic format (Adobe Acrobat file only) to Audls@dodig.osd.mil. Copies of the management comments must contain the actual signature of the authorizing official. We cannot accept the / Signed / symbol in place of the actual signature. If you arrange to send classified comments electronically, they must be sent over the SECRET Internet Protocol Router Network (SIPRNET).

We appreciate the courtesies extended to the staff. Questions should be directed to Ms. Evelyn R. Klemstine at (703) 604-9172 (DSN 664-9172) or Mr. Hugh G. Cherry at (703) 604-9614 (DSN 664-9614). See Appendix C for the report distribution. The team members are listed on the inside back cover of this report.

David K. Steensma
Deputy Assistant Inspector General
for Auditing

Office of the Inspector General of the Department of Defense

Report No. D-2003-078 **April 15, 2003**
(Project No. D2001LG-0101.02)

Global Command and Control System Joint Operation Planning and Execution System

Executive Summary

Who Should Read This Report and Why? This report should be read by those who develop the Global Command and Control System (GCCS) requirements and by program implementers, functional proponents, and members of the joint planning and execution community. The report discusses the development and fielding of the Joint Operation Planning and Execution System (JOPES).

Background. This is one in a series of reports the Inspector General of the Department of Defense is issuing on the policies and procedures that govern GCCS. The GCCS is the DoD joint command and control system designed to provide the military leadership with tools to plan and execute worldwide joint military operations. JOPES is a GCCS component system used to plan and execute joint deployments. JOPES Classic currently supports the joint deployment process, and JOPES 21 is the proposed system designed to improve support to the JOPES user community.

Results. The Defense Information Systems Agency and the Joint Staff have been unable to meet fielding milestones for JOPES 21 and will not field the component until March 2004. As of October 2002, the proposed fielding date has slipped 46 months. Further, if fielded as planned in 2004, the operating system supporting JOPES 21 will be two software generations out of date. As a result, the Defense Information Systems Agency spent about $28.4 million to develop JOPES 21 from April 1998 through July 2002 without fielding an automated system that meets user requirements. The GCCS program manager needs to develop essential acquisition documents for improved oversight of JOPES, to include a contracting strategy to address high-risk development, an acquisition program baseline to help monitor progress in meeting user requirements within resource constraints, and an integrated logistic support plan to address projected software obsolescence. The Director for Operations (J-3), Joint Staff should ensure the GCCS requirements documents accurately reflect current determinations as to necessary requirements, to include adding the requirement for a deployable JOPES 21 database. (See the Finding section of the report for the detailed recommendations.)

Management Comments and Audit Response. The Defense Information Systems Agency concurred with the recommendations; their comments are responsive. The Joint Staff concurred with comment, suggesting minor changes in the draft recommendation to more fully conform to the authority of the Chairman of the Joint Chiefs of Staff and his directors. As a result of Joint Staff comments, we revised and redirected the recommendation to ensure the system requirements documents reflect determinations as to requirements. We request that the Director for Operations (J-3), Joint Staff provide comments on the recommendation by June 16, 2003. See the Finding section of the report for a discussion of management comments and the Management Comments section of the report for the complete text of the comments.

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Background

Joint Operation Planning and Execution Process. The joint operation planning and execution process provides the framework for the Secretary of Defense and combatant commands to coordinate their efforts in the execution of complex multi-Service exercises, campaigns, and operations. In executing joint operations, at least one supported combatant command is responsible for deploying, executing, and redeploying forces and equipment in order to accomplish the assigned mission. Supporting combatant commands provide the timely and complete support needed to accomplish the mission.

Global Command and Control System. The Global Command and Control System (GCCS) is the DoD joint command and control system used to provide accurate, complete, and timely information for the operational chain of command. GCCS consists of the hardware, software, common procedures, standards, and interfaces that make up an "operational architecture" and provides worldwide connectivity with all levels of command. GCCS incorporates systems that provide situational awareness, support for intelligence, force planning, readiness assessment, and deployment applications that battlefield commanders require to effectively plan and execute joint military operations.

Joint Operation Planning and Execution System. As one of the many component systems that resides on GCCS, the Joint Operation Planning and Execution System (JOPES) helps senior-level decision makers and their staffs to plan and conduct joint military operations. War planners use JOPES to identify types of forces and logistics support required, establish the sequence for moving forces, and manage the deployment process to sustain an operation plan.

JOPES Classic. JOPES Classic has supported the joint planning and execution community for 13 years. In 1996, when GCCS became the joint command and control system of record, JOPES Classic applications were transferred to GCCS from the Worldwide Military Command and Control System.[1] The Joint Staff decided not to provide immediate enhancements to the JOPES application but to wait until requirements had been developed for a follow-on system.

21st Century JOPES. In 1998 the Defense Information Systems Agency (DISA) started development of JOPES 2000, a significant enhancement and product improvement of JOPES Classic that included Oracle database products and a consolidated database architecture. Fielding of JOPES 2000 was projected for May 2000 but was delayed. In March 2002, the Director for Operations, Joint Staff renamed JOPES 2000 to JOPES 21. For this report we use the JOPES 21 name.

[1] The Worldwide Military Command and Control System was the primary global command and control system between the 1960s and 1996. The Worldwide Military Command and Control System also supported the automated data processing portion of JOPES.

Requirements Validation. The Joint Staff and GCCS users participate in requirements validation for JOPES.

Joint Staff. The Joint Staff, as the project sponsor for all GCCS applications, represents the needs of the users. Through the requirements validation and approval process, the Joint Staff identifies and prioritizes functional requirements GCCS must satisfy.

User Community. JOPES users work within the combatant commands, the Services, the Joint Staff, and selected Defense agencies. Key JOPES users meet regularly as members of the JOPES User Advisory Group to discuss issues involving current functionality and to identify and prioritize GCCS service problems and replacement applications.

System Development and Implementation. The Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) and DISA have key roles in the development and implementation of systems residing on GCCS.

Assistant Secretary of Defense (Command, Control, Communications, and Intelligence). The Assistant Secretary provides functional and acquisition control over GCCS through review and approval of the acquisition strategy, block implementation plans, and program baseline goals. The Assistant Secretary also serves as the Chief Information Officer for DoD.

DISA. As the centralized program manager for GCCS, DISA directs design, development, acquisition, integration, testing, fielding, and baselines for GCCS applications.

Objectives

This is one in a series of reports the Inspector General of the Department of Defense is issuing on the policies and procedures that govern GCCS. The overall objective was to evaluate the joint functionality, system integration, and operation of GCCS. The specific objective for this segment of the audit was to determine whether the development of an enhanced JOPES capability has satisfied the needs of the warfighter. We also evaluated the management control program as it related to the audit objective. See Appendix A for a discussion of the audit scope and methodology and our review of the management control program. See Appendix B for prior coverage related to the audit objectives.

Development and Fielding of Joint Operation Planning and Execution System 21

DISA and the Joint Staff have been unable to meet fielding milestones for JOPES 21. As of October 2002, the projected JOPES 21 fielding dates have slipped a total of 46 months to March 2004. Although the GCCS Evolutionary Phased Implementation Plan classified JOPES 21 fielding as high risk, DISA, the Joint Staff, and the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) tailored critical acquisition requirements for the GCCS component in a manner that weakened program controls and oversight over its development. As a result, from April 1998 through July 2002, DISA spent about $28.4 million to develop JOPES 21 and another $6 million to maintain JOPES Classic[2] under two contracts, one with Science Application International Corporation and one with Pragmatics, without fielding an automated system that meets user requirements.

Criteria

The Clinger-Cohen Act of 1996 (Public Law 104-106) and the Federal Acquisition Regulation provide guidance applicable to managing and acquiring information technology resources and services.

Clinger-Cohen Act. The Clinger-Cohen Act requires that managers implement deliberate processes for maximizing value and managing risks associated with the acquisition of information technology. Section 5002 of Public Law 104-106 (section 1401, title 40, United States Code [U.S.C.]) defines information technology as an interconnected system used in the automated management of data information, including software and services. Section 5125 (40 U.S.C. 1425) states that the chief information officers of executive agencies are responsible for:

- providing advice and other assistance to the head of the executive agency and other senior management to ensure that information technology is acquired and information resources are managed effectively; and

- monitoring the performance of information technology programs of the executive agency, evaluating the performance of those programs, and advising the head of the executive agency whether to continue, modify, or terminate a program.

[2] In comments provided on the draft report, DISA stated that JOPES Classic expenditures totaled $19.7 million. We were unable to verify the means DISA used to segregate JOPES Classic and JOPES 21 costs.

Federal Acquisition Regulation. The Federal Acquisition Regulation is the primary regulation used by all Federal executive agencies in their acquisition of supplies and services with appropriated funds. The Federal Acquisition Regulation discusses in detail requirements for selecting the appropriate contract type and the need for comprehensive acquisition planning.

Fielding Milestones

DISA and the Joint Staff have been unable to meet fielding milestones for JOPES 21. In October 1997, the original requirement for JOPES was to fix database synchronization problems[3] and improve performance of the system. DISA stated, at that time, that GCCS version 3.0, projected for fielding in June 1998, would address those requirements. When GCCS version 3.0 did not resolve the synchronization and performance problems, DISA started development of JOPES 21, with a projected completion date of May 2000. As of October 2002, the projected JOPES 21 fielding dates had slipped a total of 46 months to March 2004.

Approach to Fielding JOPES 21. DISA and the Joint Staff underestimated the complexity of resolving JOPES Classic shortfalls. JOPES Classic was built on an architecture of 16 database servers located worldwide. In the "JOPES Database Server Study," (the Study) November 4, 1997, the Gartner Group, a DISA consultant, recommended consolidating the database servers into four (two located in the United States and two overseas) because that configuration would provide the required operational support and sufficient geographic dispersion[4] as well as an opportunity to more effectively address database synchronization problems. The Study recommended an approach that resulted in longer response times to users and stated that bandwidth connectivity issues would be "tolerable." To retain the same connectivity provided by JOPES Classic, consolidating the databases required upgrades to the entire network. In June 1998 the Joint Staff directed DISA to proceed with database reengineering. The new requirement of consolidating databases proved to be complex because of network connectivity, network performance, and deployability requirements.

In January 1999, a DISA and Joint Staff panel recommended the replacement of all government off-the-shelf products[5] with Oracle database applications as a quick solution to problems with JOPES Classic. The Joint Staff directed DISA to replace government off-the-shelf products with commercial off-the-shelf (COTS) products. DISA and the Joint Staff selected Oracle's Multi-Master Shared Ownership technique as the best method to facilitate JOPES database

[3] To operate effectively, JOPES 21 requires accurate, consistent, and timely data. JOPES Classic often feeds incorrect or expired data in support of specific operation plans because the system was unable to recognize the sequence that data should have been processed.

[4] The report stated that geographic proximity is important to database servers because one incident that affects a database will probably affect the other database in the same location.

[5] A government off-the-shelf product is typically created by the technical staff within a government agency or by an external entity with government funding and specifications.

synchronization. DISA stated that the multi-master replication technique had been proven in a number of industry applications and would provide the capability to replicate and maintain complete copies of JOPES deployment data at all master sites.[6] Because JOPES Classic already used older Oracle products, DISA expected that staying with the Oracle brand would ease the migration to JOPES 21, be easier to operate, and provide good performance. The requirement to add commercial software proved to be more complex than expected because commercial products were not tailored to meet government processes.

Testing Results. In June and November 1999, DISA performed demonstrations to expose JOPES users to the proposed new capabilities of JOPES 21. The June 1999 demonstration identified performance problems with JOPES 21. System response and performance of the new applications were noticeably slower than current applications, numerous capabilities were not functioning, and it was uncertain whether synchronization of the databases had been achieved. The U.S. Central Command participated in a demonstration test[7] in January 2000. After the demonstration test, U.S. Central Command users expressed concern about communication outages, missing functionalities, and database master errors.

In the December 1999 Defense Acquisition Executive Summary (DAES), the GCCS program manager reported the projected completion date for JOPES 21 would be May 2000. DAES reports, in general, serve the function of providing quarterly feedback to Milestone Decision Authorities on program execution against baselines as needed for effective oversight between milestones. In the September 2001 DAES report, the GCCS program manager revised the JOPES 21 fielding date to June 2002 in order to complete further testing and make additional developmental modifications. Between September 2001 and June 2002, DISA had exposed JOPES 21 to two system integration tests. DISA stated that the terrorist events of September 11, 2001, led to a change in GCCS requirements. The terrorist events of September 11, 2001, also led to a 2-month delay in scheduled testing. The results of a fourth system integration test showed that the Oracle replication tool did not adequately synchronize the databases. A fifth system integration test identified 279 problems with JOPES 21 development and precipitated additional fielding delays. In March 2002, DISA again revised the projected fielding date to at least March 2003 in order to resolve the differences between new requirements and existing work performed. On March 28, 2002, the Joint Staff approved the JOPES Key Performance Parameters, which formalized the requirements necessary to correct perceived shortfalls with JOPES Classic. As a result of the formalized requirements and configuration changes, the GCCS Block Implementation Plan IV designates the objective release date of March 2004 for JOPES 21. The chronology of missed milestones is presented in Table 1.

[6] JOPES deployment data required at all master sites, as identified in 1998, includes operation plans, unit characteristics data, equipment type data, scheduling and movement data, and geographical location data.

[7] The demonstration test was a scripted demonstration and incorporated some testing methodologies.

Table 1. JOPES 21 Fielding Delays

Documentation	Projected Completion Date	Time Past Initial Fielding Date
DAES December 1999	May 2000	N/A
DAES September 2001	June 2002	2 years, 1 month
DAES March 2002	Earliest March 2003	Greater than 3 years
BIP* IV October 2002	March 2004	3 years, 10 months

* Block Implementation Plan.

Tailored Critical Acquisition Requirements

JOPES 21 is a high-risk component system of GCCS. Although the "Global Command and Control System (GCCS) Transitional Evolutionary Phased Implementation Plan (EPIP) for Phase III," (EPIP III) September 29, 2000, classified JOPES fielding as high risk, DISA, the Joint Staff, and the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) tailored critical acquisition requirements for the GCCS component in a manner that weakened program controls and oversight over its development. With high-risk component systems, stringent controls are needed to ensure program success.

Governing Program Documentation. The "Global Command and Control System (GCCS) Evolutionary Acquisition Strategy, Revision 2.2," (EAS) July 14, 2000; the "Global Command and Control System (GCCS) Phase IV Requirements Identification Document (RID)," October 6, 2000 (RID IV); and the EPIP III were the three primary umbrella documents governing the execution of the GCCS program. The EAS identifies the streamlined acquisition and program management practices that support the rapid development and implementation of the GCCS program. JOPES 21 is one of many component systems of the GCCS program. The RID forms the basis for development of the EPIP. The Joint Staff signed the RID IV, but as of October 2002[8] the corresponding GCCS EPIP supporting Phase IV had not been approved by the GCCS Milestone Decision Authority. EPIP III defined technical solutions, cost, schedule and performance parameters, and other information vital to managing the development and fielding of GCCS Phase III capabilities. EPIP III also classified the fielding of JOPES as high risk.

[8] The Assistant Secretary of Defense (Command, Control, Communications, and Intelligence) directed that EPIP IV be renamed Block Implementation Plan IV and approved an Acquisition Decision Memorandum and Acquisition Program Baseline for Block Implementation Plan IV on October 28, 2002.

Evolutionary Acquisition Strategy. The GCCS EAS, which was developed by the DISA GCCS Program Management Office and approved by the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence), established the methodology used to implement acquisition and program management oversight for the GCCS program. The strategy aligns traditional acquisition milestone activities with the GCCS development phases and identifies roles and responsibilities and key business practices associated with GCCS acquisition and program management products and processes. It does not address specific components of the GCCS program.

Contracting Strategy. The GCCS EAS does not provide an adequate contracting strategy to address high-risk development projects. EPIP III classified the risks for fielding JOPES 21 as high based on functional, operational, and technical assessments. However, the DISA program manager did not adjust the contract type to provide the contractor reasonable risk and greater incentives to complete the project. Federal Acquisition Regulation 16.103(a), "Negotiating Contract Type," September 2001 edition,[9] states:

> The objective is to negotiate a contract type and price (or estimated cost and fee) that will result in reasonable contractor risk and provide the contractor with the greatest incentive for efficient and economical performance.

Federal Acquisition Regulation 16.306(b), "Cost-Plus-Fixed-Fee Contracts," states:

> A cost-plus-fixed-fee contract normally should not be used in development of major systems once preliminary exploration, studies, and risk reduction have indicated a high degree of probability that the development is achievable and the Government has established reasonably firm performance objectives and schedules.

DISA elected to use a cost-plus-fixed-fee contract type for JOPES 21 database development as part of the Defense Information Infrastructure contract. DISA stated that the Defense Information Infrastructure contract would provide the expertise to coordinate the complex interactions of the tasks that create, build, and operate the infrastructure. A task order was issued in 1998 under an indefinite-delivery, indefinite-quantity contract and was renewed annually over 4 consecutive years. Cost-plus-fixed-fee contracts reimburse the contractor for all costs as well as pay a negotiated fee that is fixed at the inception of the contract and continues over the term of the tasking. A cost-plus-fixed-fee contract provides the contractor only a minimum incentive to control costs or to complete the project quickly because it does not include measurable performance standards or performance penalties and incentives.

[9] The March 1998 edition of the Federal Acquisition Regulation was the current edition when JOPES 21 was added to contract DCA100-97-D-0043; however, the wording in this section is identical in both editions.

Performance-Based Service Contracting. In selecting the Defense Information Infrastructure Integration contract, DISA stated that the risk was high and that there was concern for a potential overlap with other DISA contracts. To achieve greater cost savings, however, and better results in government contracting, Congress and the administration have encouraged greater use of performance-based service contracts.[10] Under that type of contract, contractors are provided as much freedom as possible in figuring out how best to meet the government's performance objective. Performance-based contracts encourage contractors to be innovative and to find cost-effective methods for delivering services. Additionally, performance-based service contracts generally should have the following attributes.

- Describe what outcomes the government is looking for and leave it up to the contractor to decide how best to achieve those outcomes.
- Set measurable performance standards.
- Describe how the contractor's performance will be evaluated in a quality assurance plan.
- Include performance penalties and incentives as appropriate.

DISA should negotiate performance-based service contracts for the development and fielding of GCCS high-risk components.

Requirements Identification Document. RID IV, which was developed by the Joint Staff, provides a brief description of requirements for JOPES 21 in ranked order based on criteria expressed in the goals of the "GCCS Strategic Plan 1999-2002," December 27, 1999. JOPES 21 requirements support strategic goals for force planning, force deployment and redeployment, and force sustainment. RID IV also contains key performance parameters for the ranked JOPES 21 requirements. The EAS states:

> In the GCCS evolutionary acquisition paradigm, the RID is the functional equivalent of the time-phased Operational Requirements Document (ORD) and lists the incremental requirements that are to be met through the various IT [information technology] layers and phases of GCCS.

However, RID IV does not address several specific performance requirements necessary to meet an operational need for JOPES 21. Although the JOPES component was identified as high risk, RID IV does not discuss the shortcomings of existing systems; command, control, communications, computers, and intelligence support requirements architectures; and computer resource constraints. RID IV does not identify all requirements in output-oriented and measurable terms, or define the expected mission capability in various environments. In addition, RID IV does not address the combatant commands' long-standing requirement for a deployable JOPES database. After the

[10] GAO-02-1049, "Contract Management: Guidance Needed for Using Performance-Based Service Contracting," September 2002.

January 2000 demonstration test, the Joint Staff agreed with U.S. Central Command users that a deployable database was necessary. However, DISA stated that adding deployability as another requirement would further delay delivery of JOPES 21. Consequently, DISA and the Joint Staff waited until November 2001 to review progress on fielding JOPES 21 before adding the requirement for a deployable JOPES database to the JOPES contract in April 2002. However, RID IV does not include the deployable database for JOPES 21.[11] In order to effectively develop JOPES 21, all validated requirements that users need must be fully documented. The Director for Operations (J-3), Joint Staff should ensure the requirement for a deployable database is included. The Director for Operations (J-3), Joint Staff should also identify the shortcomings of existing systems; identify command, control, communications, computers, and intelligence support requirements; identify computer resource constraints; and identify requirements in output-oriented and measurable terms, or define the expected mission capability in various environments to the GCCS requirements document.

Evolutionary Phased Implementation Plan. EPIP III, which was developed by the GCCS Program Management Office and approved by the Assistant Secretary of Defense (Command, Control, Communications, and Intelligence), was prepared in accordance with the GCCS EAS. EPIP III states JOPES 21 will be delivered during GCCS Phase III. Table 3-4 in EPIP III, section 3.7, "Phase III Deliverables," identifies "JOPES 2000" as a GCCS deliverable. EPIP III also describes how the GCCS program plans to satisfy the requirements in the "Global Command and Control System Phase III Requirements Identification Document," December 22, 1998, and contains the Evolutionary Phased Baseline for GCCS Phase III as well as an integrated logistics support section for the GCCS program.

Program Baselines. The GCCS EAS requires the establishment of a functional equivalent to the Acquisition Program Baseline. A program baseline establishes a management control mechanism to verify that the program meets user requirements within resource constraints. All programs, without regard to actual size, should have an approved program baseline at the time of program initiation that should be modified only at subsequent program reviews or in response to a program deviation. Each parameter included in the baseline must establish both an objective (desired) and a threshold (minimum acceptable) value necessary to satisfy user needs. The program manager should report program deviations of cost, performance, or schedule within 30 days of the occurrence as a means of providing program visibility to decision makers.

DISA had not established a GCCS program baseline before EPIP III. Consequently, there was no control mechanism to measure JOPES 21 efforts and progress from 1998 through September 29, 2000. EPIP III provides a program baseline that identifies a number of JOPES 21 requirements projected for fielding in Phase III. However, the funding objectives and threshold amounts are at the GCCS program level, not the JOPES 21 component level. Although JOPES 21 was identified as high risk, as of September 2000, DISA had not established a

[11] The JOPES Key Performance Parameters memoranda approved March 28, 2002, by the Joint Staff includes the deployable database.

program baseline at the component level of detail. Without a program baseline, reportable program deviations for JOPES 21 can be overlooked until the problems become more serious and expensive.

The JOPES 21 program would benefit if DISA established a program baseline that addresses objective and threshold values for the system.

Integrated Logistics Support. EPIP III addresses the need to satisfy integrated logistics support requirements, such as maintenance, software support, personnel, support documentation, configuration management, and hardware requirements, for GCCS Phase III. EPIP III does not adequately address the support requirements for the JOPES 21 operating system or database.

If JOPES 21 is fielded as projected in March 2004, the operating system supporting JOPES 21 could be two software generations out of date. Solaris 8, released on February 1, 2000, is the JOPES 21 operating system. Sun Microsystems delivers a new release of its Solaris operating system approximately every 24 months. For example, Solaris 9 was released on May 29, 2002. Sun Microsystems provides approximately 4 years of standard support from the software release date for each Solaris version. After the 4 years of standard support, customers may contract for 5 additional years of support.[12] Therefore, when JOPES 21 is fielded in March 2004, the Solaris 8 operating system will have approximately 3 months of standard support remaining; an additional 5 years of support could be contracted for. DISA does not have a support plan to address software supportability of the Solaris operating system. DISA should develop and document an integrated logistics support plan to address software supportability of the Solaris operating system. The integrated logistics support plan should also address contingencies, such as additional delays in delivery, which could affect future cost and performance of JOPES 21.

Support Costs for JOPES Classic and JOPES 21

From April 1998 through September 2002, DISA spent about $28.4 million to develop JOPES 21 and another $6 million to maintain JOPES Classic under two contracts, one with Science Application International Corporation and one with Pragmatics, without fielding an automated system that meets user requirements. DISA officials did not track JOPES 21 expenses separately, but our best estimates are shown in Table 2.

[12] The 5 years of additional support covers 2 years of standard support with no material reduction in the level of support and 3 years with only telephone support and access to existing patches.

Table 2. JOPES Contracts
(in millions)

	1998	1999	2000	2001	2002	Total
SAIC[1]	$1.9	$3.0	$3.7	$4.5	$3.6	$16.7
Pragmatics[2]	3.6	2.7	2.5	4.3	4.6	17.7
Total JOPES Investment	**$5.5**	**$5.7**	**$6.2**	**$8.8**	**$8.2**	**$34.4**
Less JOPES (Classic)[3]	-	2.2	3.8	-	-	6.0
Equals JOPES 21 Development	**$5.5**	**$3.5**	**$2.4**	**$8.8**	**$8.2**	**$28.4**

[1] Science Applications International Corporation; DCA100-97-D-0043.
[2] Formerly DCA100-97-D-0026, now GS-35F-4810G.
[3] Based on spending plan in EPIP III.

The contract with Science Applications International Corporation provides technical support for both the JOPES Classic and JOPES 21 databases. Additionally, Science Applications International Corporation provided technical support for the integration of COTS tools, performance tuning, and development of an application to synchronize databases as a backup to commercial products. The Pragmatics contract provides for the design, development, maintenance, and testing of applications for both JOPES Classic and JOPES 21. The Block Implementation Plan IV cost estimate for the sustainment and phaseout of JOPES Classic and the completion and installation of JOPES 21 is $7.9 million.

Management Comments on the Finding and Audit Response

DISA Comments. DISA stated JOPES 21 was never scheduled for delivery during Phase III, but was the objective solution for Phase III. DISA also stated that there was no requirement to establish a program baseline at the component level of detail, and no advantage to doing so, because component baselines would artificially restrict the trade space between the thresholds and the objectives for GCCS component performance, schedule, and cost. Further, the program manager uses a variety of tools internal to the program to manage the planning and execution of all the components that are part of GCCS. DISA also stated that there must be a trade-off between schedule and life cycle. To continually chase new technologies requires additional time and effort to develop, integrate, test, and field the new technology. Further, if plans and schedules were to be

reworked every time new technology became available, then nothing would ever be fielded.

Audit Response. We revised the finding discussion to clarify our basis for considering JOPES 21 to be a deliverable. Although the GCCS program manager has a wide variety of internal program management tools to facilitate the timely delivery of JOPES 21, he has been unable to effectively use them. By combining high-risk component development efforts with other GCCS component developments, decision makers, who could facilitate the JOPES 21 development process, lack full awareness of cost, performance, and schedule deviations affecting JOPES 21. It was not our intent to direct DISA to chase new technology, but to consider the pace of emerging technology in the design of life-cycle support. Vendor support is one of the advantages of using COTS instead of Government off-the-shelf software. As the software approaches the end of its life cycle, the benefits in using COTS are negated because the Government can no longer take advantage of vendor support.

Recommendations, Management Comments and Audit Response

Revised and Redirected Recommendation. As a result of Joint Staff comments, we revised and redirected Recommendation 2. and modified the finding discussion accordingly.

1. We recommend that the Global Command and Control System program manager at the Defense Information Systems Agency improve controls and oversight over the Joint Operation Planning and Execution System 21 by:

a. Negotiating performance-based service contracts for the development and fielding of Global Command and Control System high-risk components.

b. Establishing a program baseline that addresses objective and threshold values for the system.

c. Developing and documenting an integrated logistics support plan to address software supportability of the Solaris operating system. The integrated logistics support plan should also address contingencies, such as additional delays in delivery, which could affect future cost and performance of JOPES 21.

DISA Comments. DISA concurred, stating that the GCCS program manager has directed the increased use of cost-plus-award-fee type contracts and has increased performance-based contracting awards from zero to six since FY 2002. DISA also stated that the Block IV Acquisition Program Baseline, approved on October 28, 2002, includes objective and threshold values for GCCS Block IV performance, schedule, and cost. Finally, DISA stated that the program manager started work on an integrated logistics support plan with an estimated completion date of September 30, 2003.

2. We recommend that the Director for Operations (J-3), Joint Staff ensure that the Global Command and Control System requirements documents accurately reflect current determinations as to necessary requirements, to include adding the deployable database requirement; describing the shortcomings of existing systems; identifying command, control, communications, computers, and intelligence support requirements; identifying computer resource constraints; identifying all requirements in output-oriented and measurable terms; and defining the expected mission capability in various environments.

Joint Staff Comments. The Vice Director, Joint Staff concurred with comment, and suggested changing and redirecting the draft recommendation to the Director for Operations (J-3), Joint Staff because the Chairman of the Joint Chiefs of Staff and his directors do not have the authority to modify requirements documents. The Vice Director also suggested that the recommendation be revised to include a review of alternatives to JOPES Classic and JOPES 21. The Joint Staff Director for Command, Control, Communications, and Computer Systems provided similar comments. See the Management Comments section of the report for the full text of both responses.

Audit Response. The Joint Staff comments are partially responsive. The audit observed that alternatives were originally considered in selecting JOPES 21, and we believe that further review of alternatives would be without basis. However, we redirected and revised the recommendation to more fully conform to the authority of the Joint Staff. We request that the Director for Operations, Joint Staff provide comments in response to the final report.

Appendix A. Scope and Methodology

We reviewed applicable guidance and regulations that the Joint Staff, the combatant commands, and DISA used to monitor operational issues. We also reviewed their guidance and procedures pertaining to GCCS JOPES Classic and JOPES 21.

We examined DoD guidance that governs the application and management of GCCS. We analyzed Chairman, Joint Chiefs of Staff (CJCS) Manual 6721.01, "Global Command and Control System Functional Requirements Evaluation Procedures," March 15, 1997; CJCS Instruction 3141.01A, "Responsibilities for the Management and Review of Operation Plans," February 15, 1999; CJCS Instruction 6721.01A, "Global Command and Control Management Structure," November 27, 2000; CJCS Instruction 6722.01A, "Global Command and Control System Configuration Management Policy," July 1, 2000; CJCS Instruction 3020.01, "Managing, Integrating, and Using Joint Deployment Information Systems," June 12, 2000; CJCS Guide 3122, "Time-Phased Force and Deployment Data Primer," November 1, 2001; CJCS Manual 3122.01, "Joint Operation Planning and Execution System Volume I (Planning Policies and Procedures)," July 14, 2000; DoD Regulation 5000.2-R, "Mandatory Procedures for Major Defense Acquisition Programs and Major Automated Information System Acquisition Programs," April 5, 2002; DoD Directive 8000.1, "Management of DoD Information Resources and Information Technology," February 27, 2002; DoD Directive 5158.5, "Joint Deployment Process Owner," November 12, 2001; and DoD Directive 5200.28, "Security Requirements for Automated Information Systems," March 21, 1988.

We also reviewed the User's Guide for JOPES, May 1, 1995; GCCS JOPES, Performance Specifications, April 18, 2001; Joint Publication 3-35, "Joint Deployment and Redeployment Operations," September 7, 1999; "GCCS Strategic Plan 1999-2002," December 27, 1999; "JOPES Strategic Plan," April 2000; "Information Technology Management Reform Act" (Clinger-Cohen Act of 1996) for performance measures for managing information technology; the Federal Acquisition Regulation, March 1998 and September 2001; and "Defense Planning Guidance," FY 2004 through 2009, May 2002.

We also reviewed implementing guidance developed by DISA. We reviewed the September 2000 EPIP III; the "Global Command and Control System Evolutionary Phase Implementation Plan for Phase IV, Draft (GCCS Versions 3.4.0 through 4.2.0)," June 29, 2001; Evolutionary Acquisition Strategy, July 14, 2000; the Global Command and Control System Requirements Identification Document for Phase III, December 22, 1998; Requirements Identification Document IV, October 6, 2000; and DAES reports, December 1999 to March 2002.

We analyzed JOPES Classic and JOPES 21 contracts DCA100-97-D-0043 (covering April 1998 through May 2002), DCA100-97-D-0026 (covering February 1998 through April 2002), and GS-35F-4810G (covering April 2002 through September 2002).

To identify the consequences of delays in fielding JOPES 21 and to determine whether the deployment process was executed properly, we:

- interviewed individuals responsible for developing and implementing JOPES from the Joint Staff directorates for Operations (J-3), Logistics (J-4), Command, Control, Communications, and Computer Systems (J-6), Operational Plans and Interoperability (J-7); Army, Navy, Air Force, and Marine Corps headquarters offices; selected unified commands (U.S. Southern Command, U.S. Joint Forces Command, U.S. European Command, U.S. Central Command, U.S. Transportation Command, and U.S. Special Operations Command); the Joint Staff Support Center; the Joint Deployment Training Center; and DISA to determine whether the deployment procedures were followed;

- conducted 52 meetings between April 2002 and October 2002 with about 230 individuals from the JOPES user community to determine whether JOPES was meeting their needs;

- analyzed Joint Universal Lessons Learned supporting Operations Enduring Freedom (covering December 2001 through March 2002) and JOPES historical data for actual problems with JOPES (covering August 2000 through January 2002); and

- reviewed contracts DCA100-97-D-0043, DCA100-97-D-0026, and GS-35F-4810G to identify the costs of developing JOPES 21 and the amounts spent for the maintenance of JOPES Classic since 1998.

We performed this audit from March through December 2002 in accordance with generally accepted government auditing standards.

Use of Computer-Processed Data. We did not use computer-processed data to perform this audit.

High-Risk Area. The General Accounting Office has identified several high-risk areas in DoD. This report provides coverage of the DoD Systems Modernization high-risk area.

Management Control Program Review

DoD Directive 5010.38, "Management Control (MC) Program," August 26, 1996, and DoD Instruction 5010.40, "Management Control (MC) Program Procedures," August 28, 1996, require DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and to evaluate the adequacy of those controls.

Scope of the Review of the Management Control Program. We reviewed the adequacy of management controls at the Joint Staff and DISA related to GCCS.

We reviewed management controls over GCCS requirements generation and program implementation. We also reviewed management's self-evaluation applicable to those controls.

Adequacy of Management Controls. We identified material management control weaknesses within the Joint Staff and DISA as defined by DoD Instruction 5010.40. Specifically, umbrella documents for the GCCS program did not contain sufficient details to evaluate and monitor the development and fielding of high-risk components of the system. All recommendations in this report, if implemented, will provide the necessary controls to ensure JOPES requirements are met and senior commanders and their staff follow established procedures for planning and executing joint deployments. A copy of the report will be provided to the senior officials responsible for management controls at the Joint Staff and DISA.

Adequacy of Self-Evaluation. The Joint Staff identified GCCS as part of a larger assessable unit; however, the Joint Staff did not perform any tests that related to GCCS or JOPES. Therefore, the Joint Staff did not identify or report the material management control weaknesses identified by the audit. DISA addressed management controls as an assessable unit and performed tests of controls on areas applicable to our audit objectives. DISA officials did not perform adequate tests of controls to ensure that JOPES requirements were met.

Appendix B. Prior Coverage

During the last 5 years, the Inspector General of the Department of Defense (IG DoD), the Army Audit Agency, and the Air Force Audit Agency have issued seven reports discussing GCCS. Unrestricted IG DoD reports can be accessed at http://www.dodig.osd.mil/audit/reports. Unrestricted Army Audit Agency reports can be accessed at https://www.aaa.army.mil/reports from certain domains. Unrestricted Air Force Audit Agency reports can be accessed at https://www.afaa.hq.af.mil/afck/plansreports/reports from certain domains.

IG DoD

IG DoD Report No. D-2002-133, "Global Command and Control System Readiness Assessment System Output Tool," July 24, 2002

IG DoD Report No. D-2002-084, "Guidance for the Global Command and Control System Common Operational Picture," May 1, 2002

IG DoD Report No. D-2001-168, "Acquisition Management of the Global Transportation Network," August 2, 2001

IG DoD Report No. D-2001-157, "Global Command and Control System – Meteorological and Oceanographic Application," July 11, 2001

IG DoD Report No. D-2000-063, "Information Technology Funding in the Department of Defense," December 17, 1999

Army

Army Audit Agency Report No. AA 99-87, "Global Command and Control System-Army Program," January 22, 1999

Air Force

Air Force Audit Agency Report No. 00058001, "Maintenance of Time-Phased Force and Deployment Data Files," November 23, 2000

Appendix C. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense (Acquisition, Technology, and Logistics)
Under Secretary of Defense (Comptroller)/Chief Financial Officer
    Deputy Chief Financial Officer
    Deputy Comptroller (Program/Budget)
Under Secretary of Defense for Personnel and Readiness
Assistant Secretary of Defense (Command, Control, Communications, and Intelligence)

Joint Staff

Director, Joint Staff
    Directorate for Operations (J-3)
    Directorate for Logistics (J-4)
    Directorate for Command, Control, Communications, and Computer Systems (J-6)
    Directorate for Operational Plans and Interoperability (J-7)

Department of the Army

Auditor General, Department of the Army
Commander, U.S. Army, Europe

Department of the Navy

Naval Inspector General
Auditor General, Department of the Navy

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Auditor General, Department of the Air Force
Commander, U.S. Air Forces in Europe

Unified Commands

Commander, U.S. European Command
Commander, U.S. Pacific Command
Commander, U.S. Joint Forces Command
Commander, U.S. Southern Command
Commander, U.S. Central Command
Commander, U.S. Northern Command
Commander, U.S. Special Operations Command
Commander, U.S. Transportation Command

Other Defense Organizations

Director, Defense Information Systems Agency
    Program Manager, Global Command and Control System

Non-Defense Federal Organization

Office of Management and Budget

Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Committee on Government Reform
House Subcommittee on Government Efficiency and Financial Management, Committee on Government Reform
House Subcommittee on National Security, Emerging Threats, and International Relations, Committee on Government Reform
House Subcommittee on Technology, Information Policy, Intergovernmental Relations, and the Census, Committee on Government Reform

Joint Staff Comments

Final Report Reference

THE JOINT STAFF
WASHINGTON, DC

Reply ZIP Code:
20318-0300

DJSM-0258-03
21 March 2003

MEMORANDUM FOR THE INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE

Subject: Report on the Global Command and Control System (GCCS) Joint Operation Planning and Execution System (JOPES), Project No. D20001LG-0101.0

1. Thank you for the opportunity to comment on the draft GCCS JOPES report.[1] I concur in the draft report in general, but offer the following comments:

a. General Comment. Certain information and references within the audit are inaccurate. The Operations Directorate, Joint Staff, discussed the matter with Mr. Hugh Cherry of DOD IG and they agreed that a corrected copy of the audit will be forwarded to the DOD IG by 1 May 2003.

b. Page 12, Paragraph 2, sixth line. Change as follows: "...output-oriented and measurable terms; ~~and~~ defining the expected mission capability in various environments~~.~~; and reviewing other alternatives to JOPES (Classic)." — Page 13

REASON: Information technology (IT), people, processes, and procedures are being reviewed to determine what changes need to take place to have a more responsive system. IT alternatives within JOPES will be looked at during this review.

c. Page 12, Paragraph 2, first line. Change as follows: "We recommend that the Director, Operations Directorate, Joint Staff, ~~modify~~ ensure that the Global Command and Control System requirements document~~s, to include~~ accurately reflect current determinations as to necessary requirements, including adding the..." — Page 13 Redirected; Revised

REASON: Neither the Chairman of the Joint Chiefs of Staff nor his Directors have the authority to modify GCCS requirements documents. Instead, the Chairman has the authority to provide "policy guidance and oversight" and "guide development of the requirements document." "Guidance" is not the same thing as execution authority.

2. My point of contact for this matter is Ms. Mary Forbes, J-6V, (703) 695-6777.

JAMES A. HAWKINS
Major General, USAF
Vice Director, Joint Staff

Reference:
1 DOD IG memorandum, 24 December 2002, "Report on the Global Command and Control System Joint Operation Planning and Execution System (Project No. D2001LG-0101.02)"

Final Report Reference

THE JOINT STAFF
WASHINGTON, DC

Reply ZIP Code:
20318-0300

20 March 2003

MEMORANDUM FOR THE INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

Subject: Report on the Global Command and Control System (GCCS) Joint Operation Planning and Execution System (JOPES), Project No. D20001LG-0101.02

1. Thank you for the opportunity to comment on the draft GCCS JOPES report. The Joint Staff concurs with recommendation (2) on page 12 of the draft report, but offers the following comments:

a. **J6** – change the beginning of the recommendation to read "We recommend that the Director, J3 . . . ." as that Directorate oversees GCCS requirements. Redirected

b. **J7** – expand the recommendation to suggest the Joint Staff review other alternatives to JOPES Classic and JOPES 21.

c. **J3** – will forward to the DOD IG by 1 May 2003, an annotated copy of the draft audit to correct certain information and references.

d. **JS Legal** – change the beginning of the recommendation to read: 'We recommend that the Director, J3, ensure that the GCCS requirements documents accurately reflect current determinations as to necessary requirements, including, adding the . . . ." Neither the Chairman, Joint Chiefs of Staff (CJCS) nor his Directors have the authority to modify GCCS requirements documents. Instead, the CJCS has the authority to provide "policy guidance and oversight" and "guide development of the requirements document." "Guidance" is not the same thing as execution authority. Revised

2. My point of contact for this matter is Ms. Mary Forbes, J6V, (703) 695-6777.

JOSEPH K. KELLOGG, JR.
Lieutenant General, USA
Director for C4 Systems (J-6)

Defense Information Systems Agency Comments

DEFENSE INFORMATION SYSTEMS AGENCY
701 S. COURTHOUSE ROAD
ARLINGTON, VIRGINIA 22204-2199

IN REPLY
REFER TO: INSPECTOR GENERAL (IG) 4 February 2003

MEMORANDUM FOR DEPARTMENT OF DEFENSE INSPECTOR GENERAL

SUBJECT: Draft Report, Global Command and Control System: Joint Operation Planning and Execution System, D2001LG-0101.02

1. The enclosed document provides the Defense Information Systems Agency response on the Draft Report for the audit described above.

2. The points of contact for this action are the Audit Liaison Team: Teddie Steiner/Liz Lippmann at 703.607-6316/6306.

FOR THE DIRECTOR:

Enclosure a/s

FRANK S. CHASE
Acting Inspector General

Quality Information for a Strong Defense

DEFENSE INFORMATION SYSTEMS AGENCY (DISA) RESPONSE TO DoDIG DRAFT "REPORT ON THE GLOBAL COMMAND AND CONTROL SYSTEM JOINT OPERATION PLANNING AND EXECUTION SYSTEM (Project No. D20001LG-0101.02" of 24 DECEMBER 2002

Introduction

- Comments regarding the discussion portion of the draft report are attached as background information.
- Direct quotes from the DOD IG draft report are presented in italics.

DOD IG Recommendations

1. *We recommend that the Global Command and Control System program manager at the Defense Information Systems Agency improve controls and oversight over the Joint Operation Planning and Execution System 21 by:*

   a. *"Negotiating performance-based service contracts for the development and fielding of Global Command and Control System high-risk components."*

   DISA concurs with this recommendation. As existing contracts approach expiration, the GCCS Program Manager (PM) assesses the most effective structure for ensuing contracts with a goal of using contractors capable of satisfying cost-schedule-performance objectives through mechanisms such as performance-based service contracts.

   In FY02, the GCCS PM initiated action to reduce the number of time and material (T&M) and cost plus fixed fee (CPFF) contracts used on the GCCS program. The strategy considered risk, contract value, and task duration. The plan called for an increase in performance-based contracts (PBC) and cost-plus-award fee (CPAF) contracts. Since FY02, the GCCS PM has eliminated all T&M contracts while increasing CPAF contracts; assigning the appropriate risk (both to the Government and contractor) and providing greater incentive for contractors to maintain cost, schedule, and performance objectives.

   The GCCS PM has issued guidance that requires, based upon an assessment of technical and schedule risk, development and sustainment efforts of a nature and order of magnitude similar to JOPES 21 use a CPAF type contract.

Additionally, since FY02, the GCCS PM has increased PBC awards from zero (0) to six (6). The GCCS PMO believes this transformed contract strategy and increased usage of PBC adequately addresses the IG's concern that DISA develop and implement a performance-based service contracting strategy that addresses the high risk of systems development

b. *"Establishing a program baseline that addresses objective and threshold values for the system."*

DISA concurs with this recommendation. The GCCS PM prepares an Acquisition Program Baseline (APB) for each block of the GCCS system in accordance with OUSD(AT&L) and OASD(C3I) direction and guidance. The Block IV APB, approved by the Milestone Decision Authority on 28 Oct 2002, includes objective and threshold values for GCCS Block IV performance, schedule, and cost.

c. *"Developing and documenting an integrated logistics support plan to address software supportability of the Solaris operating system. The integrated logistics support plan should also address contingencies, such as additional delays in delivery, which could affect future cost and performance of JOPES 21."*

DISA concurs with this recommendation. The GCCS Program Manager has undertaken development of a GCCS Integrated Logistics Support Plan. **Plan expected to be completed by 30 Sep 03.**

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Background Comments

1. Page 1, Background Section, "21st Century JOPES" paragraph:

Report states that, *"In 1998 the Defense Information Systems Agency (DISA) started development of a new system—JOPES 2000…"*

DISA strongly disagrees with this statement: JOPES 2000 was ***not*** a new start; rather, it was product improvement of the existing JOPES capability within the overall GCCS system construct. The existing JOPES Classic was becoming unsupportable long term due to hardware and software obsolescence, and increasingly problematic database synchronization and data accuracy across the enterprise. The Joint Staff "GCCS Phase III Requirements Identification Document" of 22 Dec 1998 contains JOPES 2000 requirements under the section "JOPES enhancements." These requirements speak primarily to correction of problems and improvements in what are commonly referred to as the logistics-related "ilities" (supportability, maintainability, etc.) rather than to addition of new applications within JOPES. JOPES Key Performance Parameters formalized by the JS on 28 Mar 2002 contained 16 requirements, only one cites Functionality as an operational requirement. All the others speak to improvements in data synchronization, reduced time for queries to be processed with the system, better system availability, and other similar features that are improvements in the technology rather than in the functions provided.

Revised

2. Page 5, Fielding Milestones Section, "Testing Results" subsection, 2nd paragraph:

The context in which decisions were made is not fully portrayed as written. In August 2001 DISA began staffing the DRAFT Phase IV EPIP which showed JOPES 2000 "objective" release date of July 2002. The terrorist events of September 11, 2001 led to a change in GCCS program priorities due to Combatant Commanders' requirement for accelerated delivery of specific GCCS capabilities for use in the Global War on Terrorism. This led directly to the Block IV schedule portrayed in the MDA-approved Block IV Implementation Plan (BIP) for the entire GCCS program, of which the reengineered JOPES was one component.

Revised

3. Page 6, Tailored Critical Acquisition Requirements Section, "Governing Program Documentation" paragraph:

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The paragraph incorrectly aligns the Phase IV Requirements Identification Document (RID) with the Phase III Evolutionary Phase Implementation Plan (EPIP). The Phase III EPIP was developed in response to the Phase III RID of 22 Dec 1998, not to the Phase IV RID of 6 Oct 2000. The Phase IV RID was the basis for development of the GCCS Block IV Implementation Plan (BIP), which was approved by the Milestone Decision Authority on 28 October 2002. The paragraph is also missing an important distinction, that the Phase III EPIP categorized JOPES 2000 as an "objective" solution, i.e., it was not scheduled for delivery during Phase III. Phase III EPIP, Appendix B Requirements Traceability Matrix, items 36-42 apply.

Revised Page 9

Page 8

4. Page 7, Tailored Critical Acquisition Requirements Section, "Contracting Strategy and Performance-Based-Service Contracting" subparagraphs:

In FY02, the GCCS PM initiated action to reduce the number of time and material (T&M) and cost plus fixed fee (CPFF) contracts used on the GCCS program. The strategy considered risk, contract value, and task duration. The plan called for an increase in performance-based contracts (PBC) and cost plus award fee (CPAF) contracts. Since FY02, the GCCS PM has eliminated all T&M contracts while increasing CPAF contracts; assigning the appropriate risk (both to the Government and contractor) and providing greater incentive for contractors to maintain cost, schedule, and performance objectives.

The GCCS PM has issued guidance that requires development and sustainment efforts of a nature and order of magnitude similar to JOPES 21 use a CPAF type contract. However, based upon risk (both technical and schedule) the type may vary. Additionally, the GCCS PM has embraced the use of PBC. Since FY02, the GCCS PM has increased PBC awards from zero (0) to six (6). The GCCS PMO believes this transformed contract strategy and increased usage of PBC adequately addresses the IG's concern that DISA develop and implement a performance-based service contracting strategy that addresses the high risk of systems development.

5. Page 9, Tailored Critical Acquisition Requirements Section, "Evolutionary Phased Implementation Plan" paragraph:

Revised

This paragraph incorrectly states that the *"EPIP III states JOPES 21 will be delivered during GCCS Phase III."* The Phase III EPIP categorized the reengineered JOPES as an "objective" solution for the phase and did not schedule delivery during

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Phase III. Phase III EPIP, Appendix B Requirements Traceability Matrix, items 36-42 apply.

6. Page 9, Tailored Critical Acquisition Requirements Section, "Program Baselines" subsection, second paragraph:

States that *"EPIP III provides a program baseline that identifies a number of JOPES 21 requirements projected for fielding in Phase III."* This is not true. As described above, the Phase III EPIP categorizes JOPES 2000 as an "objective" solution for Phase III, not as a "threshold" solution.

This paragraph also states *"Although JOPES 21 was identified as high risk, as of September 2000, DISA had not established a program baseline at the component level of detail."* This statement is misleading. An APB is developed by the Program for each GCCS Block. The APB reflects the program-level parameters within which the Program Manager (PM) will execute and report to OASD(C3I). There is no requirement for establishing an APB at the "component" level, nor is there any managerial advantage to doing so as it artificially restricts the PM's program trade space between performance, schedule, and cost across the spectrum of GCCS components. The PM uses a variety of tools internal to the program to manage the planning and execution of all the components comprising GCCS.

7. Page 10, Tailored Critical Acquisition Requirements Section, "Integrated Logistics Support" subsection, second paragraph:

The discussion of life span for operating systems is flawed. Component developers, system integrators and testers - particularly on a program as large and complex as GCCS - cannot be "chasing" new technology. The time and effort needed to develop, integrate, test, and field new technology mandates that the PM determine the best tradeoff of schedule for delivering new capabilities and the life cycle considerations inherent with those new technologies. If plans and schedules were to be reworked every time new technology becomes available, nothing would ever be fielded.

8. Page 11, Support Costs for JOPES Classic and JOPES 21 Section, "Table 2. JOPES Contracts":

The GCCS PMO has conducted additional analysis and provides the following revisions to the table to more accurately portray the percentage of contract effort for JOPES Classic vs. JOPES 2000.

Footnote added Page 2

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Table 2. JOPES Contracts (In Millions)

	1998	1999	2000	2001	2002	Total
SAIC[1]	$1.8	$2.9	$4.1	$4.0	$3.6	$16.4
Pragmatics [2]	$3.6	$3.9	$3.3	$4.1	$3.6	$18.5
Total JOPES Investment	$5.4	$6.8	$7.4	$8.1	$7.2	$34.9
Less JOPES Classic[3]	$5.3	$4.9	$3.1	$2.9	$3.5	$19.7
JOPES 2000	$0.1	$1.9	$4.3	$5.2	$3.7	$15.2

[1] Science Applications International Corporation:DCA 100-97-D-0043.
[2] Formerly DCA100-97-D-0026, now GS-35F-4810G.
[3] Based on spending plan in EPIP III.

Footnote added Page 2

6

Team Members

The Readiness and Logistics Directorate, Office of the Assistant Inspector General for Auditing of the Department of Defense prepared this report. Personnel of the Office of the Inspector General of the Department of Defense who contributed to the report are listed below.

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